

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An automatic administration instrument for medical use for injecting a drug solution filled in a syringe, said automatic administration instrument comprising:

a body for housing the syringe and an injection needle;

a first motor for driving the syringe within said body in a direction toward the tip of the injection needle such that the injection needle protrudes from said body;

a second motor for operating the syringe to administer the drug solution;

a switch provided on said body, said switch being operated by pressing a part of the exterior of said body against a body region of a patient to which the drug solution is to be administered,

wherein said switch activates said first motor such that the injection needle protrudes from said body to perform needle insertion into the ~~said~~ body region, and thereafter activates said second motor to administer the drug solution.

2. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, further comprising a detection means for detecting that administration of the drug solution is completed and/or that said body is removed from the body region, wherein the first motor is operated so that the injection needle is retracted into said body after said detection means detects that administration of the drug solution is completed and/or that said body is removed from the body region.

3. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, wherein a speed of inserting the injection needle or a speed of pulling out the injection needle is variable.

4. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, wherein a speed at which the drug solution is administered by said second motor is variable.

5. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, further comprising:

an inner case that is slidably provided in an outer case of said body, said inner case being configured to attach to the injection needle and the syringe,

wherein said first motor drives the syringe by sliding said inner case in said outer case, and

wherein said first motor is operated by said switch to automatically insert the injection needle into the body region of the patient by sliding said inner case so that the injection needle protrudes from said outer case.

6. (Previously Presented) An automatic administration instrument as defined in claim 5, wherein said inner case slides such that the injection needle protruding from said outer case is retracted into said outer case to automatically remove the injection needle.

7. (Previously Presented) An automatic administration instrument as defined in claim 5, wherein said switch is a detection switch for detecting whether said body contacts the body region to which the drug solution is to be administered.

8. (Previously Presented) An automatic administration instrument as defined in claim 7, wherein insertion of the injection needle is enabled when said detection switch detects that said administration instrument contacts the body region to which the drug solution is to be administered.

9. (Previously Presented) An automatic administration instrument as defined in claim 8, wherein administration of the drug solution is stopped when said detection switch detects during administration of the drug solution that said administration instrument does not contact the body region to which the drug solution is to be administered.

10. (Previously Presented) An automatic administration instrument as defined in claim 8, wherein the injection needle is retracted into said body when said detection switch detects during insertion of the injection needle that the administration instrument does not contact the body region to which the drug solution is to be administered.

11-14. (Cancelled)

15. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, wherein injection of a drug solution is not carried out when an injection needle is not attached to said body of said administration instrument.

16. (Previously Presented) An automatic administration instrument as defined in claim 2, wherein a speed of inserting the injection needle or a speed of pulling out the injection needle is variable.

17. (Previously Presented) An automatic administration instrument as defined in claim 2, wherein a speed at which the drug solution is administered by said second motor is variable.

18-20. (Cancelled)

21. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, further comprising:

a microprocessor which outputs instructions to said first motor and said second motor.

22. (Cancelled)

23. (Currently Amended) An automatic administration instrument as defined in claim 24, ~~claim 1~~, further comprising:

a microprocessor which outputs instructions to said first motor and said second motor,

wherein said first motor rotates in a first direction to drive the syringe such that the injection needle protrudes from said body and rotates in a second direction opposite to the first direction to retract the injection needle into said body, and

wherein a speed of inserting the injection needle or a speed of pulling out the injection needle is variable.

24. (New) An automatic administration instrument for medical use for injecting a drug solution filled in a syringe, said automatic administration instrument comprising:

a body for housing the syringe and an injection needle;

a first motor for driving the syringe within said body in a first direction and in a second direction opposite to the first direction, the first direction being toward the tip of the injection needle such that the injection needle protrudes from said body,

a second motor for operating the syringe to administer the drug solution;

a switch provided on said body, said switch being operated by pressing a part of an exterior of said body against a body region of a patient to which the drug solution is to be administered, wherein said switch activates said first motor to drive the syringe in the first direction such that the injection needle protrudes from said body to perform needle insertion into the body region while said part of said exterior of said body is pressed against the body region of the patient, and thereafter activates said second motor to administer the drug solution, and after the drug is administered reactivates said first motor to drive the syringe in the second direction such that the protruding injection needle is retracted into said body while said part of said exterior of said body is pressed against the body region of the patient.